

Serial No.: 10/812,276
Amdt. dated 31 May 2006
Reply to Office Action of 20 March 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An apparatus comprising:

a discone antenna including a cone-shaped element, the physical shape of which is at least partially defined by at least one pleat, wherein each pleat includes two faces joined at a vertex having an included angle of less than 180 degrees as directed away from a principal axis of the cone-shaped element, and wherein the two faces of the pleat do not substantially overlap one another in a direction transverse to a bisector of the included angle.

Claim 2 (original): The apparatus of claim 1 wherein the discone antenna includes a disc-shaped element whose physical shape is at least partially defined by a fractal geometry.

Claim 3 (original): The apparatus of claim 1 wherein the physical shape of the cone-shaped element includes a least one hole.

Claim 4 (original): The apparatus of claim 1 wherein the physical shape of the cone-shaped element is at least partially defined by a series of pleats that extend about a portion of the cone.

Claim 5 (currently amended): An apparatus comprising:

a bicone antenna including two cone-shaped elements, the physical shape of at least one of which is at least partially defined by at least one pleat, wherein each pleat includes two faces joined at a vertex having an included angle of less than 180 degrees as directed away from a

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principal axis of the cone-shaped element, and wherein the two faces of the pleat do not substantially overlap one another in a direction transverse to a bisector of the included angle.

Claim 6 (original): The apparatus of claim 5 wherein the physical shape of one of the two cone-shaped elements is at least partially defined by at least one hole.

Claim 7 (original): The apparatus of claim 5 wherein the physical shape of one of the two cone-shaped elements is at least partially defined by a series of pleats that extend about a portion of the cone.

Claim 8 (currently amended): An apparatus comprising:
an antenna including a disc-shaped element, the physical shape of which is at least partially defined by a deterministic fractal geometry.

Claim 9 (original): The apparatus of claim 8 wherein the physical shape of the disc-shaped element is at least partially defined by a hole.